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THE EFFECT OF STRESSES AND CHALLENGES ON 'A' SCHOOL
STUDENTS' PERFORMANCE. (U) NAVY PERSONNEL RESEARCH AND
DEVELOPMENT CENTER SAN DIEGO CA J P SHEPOSH ET AL

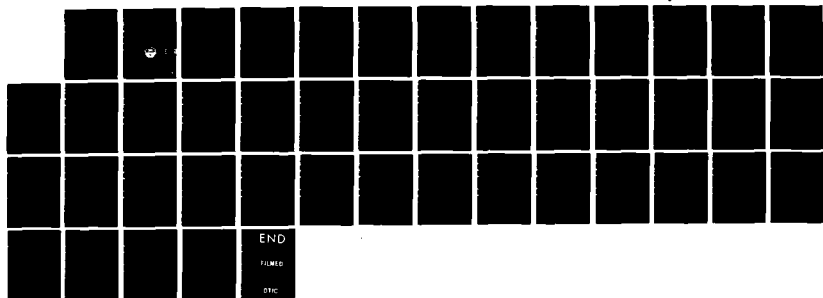
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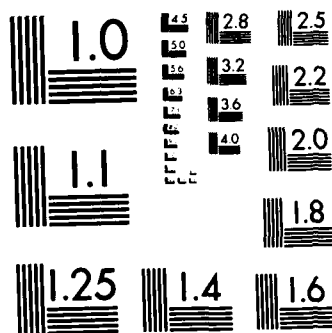
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**THE EFFECT OF STRESSES AND CHALLENGES ON
"A" SCHOOL STUDENTS' PERFORMANCE AND COMMITMENT**

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FOREWORD

This research was performed under work unit ZF63-521-021-03.03 (Personnel Assimilation and Supervision), as part of the ongoing effort at the Navy Personnel Research Center concerning the utilization of women in the Navy. The purposes of this task were to identify the factors operating in Navy training environments that are stressful or challenging for a sample of "A" school students, determine the extent to which male and female students differed with respect to the nature of reported stress, and construct a conceptual model of stress in this particular environment.

Some of the findings reported here were included in a master's thesis prepared by Bruce J. Kunkel at San Diego State University.

The authors are indebted to the Commanding Officer, Naval Technical Training Center, Meridian, Mississippi and his staff for their support and cooperation.

JAMES F. KELLY, JR.
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SUMMARY

Problem

Stress in organizations is becoming an increasingly important concern in both basic research and organizational practices. In the Navy setting, information regarding the negative environmental stressors for individuals who are at the entry point in their career life cycle (e.g., "A" school) is particularly important since factors operating at this time may have a significant impact on their career expectations, job performance, and future commitment.

Purpose

The purposes of this research were to (1) identify the factors operating in Navy training environments that are stressful and, recognizing the potential benefits of pressure, challenging for a sample of "A" school students, (2) determine the extent to which male and female students differed in the amount and nature of reported stress, and (3) construct a conceptual model to aid in understanding the effect of personal and environmental factors on a person's response to stress and the effects of stress on attitudinal and behavioral outcomes.

Approach

Subjects consisted of 240 students, 181 men and 59 women, at three Navy "A" schools. Questionnaires designed to assess environmental factors, personal factors, sources of stress, and challenge and outcome variables were administered to subjects in small class groups.

Results

1. School demands and military atmosphere were identified as the two major sources of stress and certain aspects of the school experience were regarded as the major sources of challenge.
2. No differences were found between men and women in terms of the kinds of stresses and challenges they felt affected them.
3. Perceived impact predicted satisfaction with Navy life and reported psychosomatic symptoms. These, in turn, predicted commitment to the Navy.
4. Performance was primarily influenced by environmental variables (e.g., role ambiguity) and personal attributes (e.g., achievement).

Conclusions

1. Apparently, the demands of "A" school do not pose a different set of problems for women and men trainees.
2. Nonsupportive instructors produce stress in their students and supportive instructors promote challenge. These factors, in turn, influence satisfaction and commitment.
3. Although stress and challenge are related to trainees' level of satisfaction and degree of commitment, they are not directly related to performance. Such factors as role ambiguity and role conflict, however, are directly related to performance.

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INTRODUCTION

Problem

Stress in organizations is becoming an increasingly important concern in both basic research and organizational practices (Schuler, 1980). One reason for this trend is the potential utility of this type of information in providing a more realistic view of organizational functioning. Clearly, knowledge concerning the sorts of stressors that affect the motivation and performance of organizational members would be of value in such areas as the selection of management practices and control systems. This holds not only for civilian organizations but also for military ones. Information regarding the negative environmental factors or stressors associated with the Navy setting for individuals who are at the entry point in their career (e.g., boot camp, "A" school) is particularly important since factors operating at this point in time may have a significant impact on career expectations, job performance, and future commitment to the organization (e.g., reenlistment) (cf., Abrams, Sachar, Buckley, & Brown, 1978).

Background

In contrast to earlier conceptualizations that viewed stress as either an external agent or as an internal state, the currently held view is that stress is a product of the interaction between the individual and the physical environment (McMichael, 1978). Stress is thus viewed as the combination of the particular situation and the specific personality or behavioral pattern of the individual. The "person-environment fit" model (French, Rogers, & Cobb, 1974), which emphasizes the match between the demands and characteristics of the job and the person's characteristics, is one example of this view. A lack of fit threatens the individual's well-being, which is likely to produce job dissatisfaction, depression, and physiological problems. This particular stress model is especially relevant to the ever widening role of women in the Navy. Since women are required to operate in a traditionally male-oriented organization, there is a question as to whether they manifest greater signs of stress than do their male counterparts. Additionally, are there differences between males and females as to what is stressful? Parasuraman and Alutto (1978) point to the need to address such questions. They maintain that only a few attempts have been made to analyze the influence of demographic variables on individual perception of work stresses.

The amount of stress an individual experiences may also be influenced by the phase of the career life cycle. Hall (1976) suggests that there are three points in the career life cycle that seem to be particularly stressful: entry, mid-career, and retirement. Focusing on the entry point, the new recruit in an organization is subject to reality shock. The lack of fit between expectations or aspirations and experience in "A" school and on the job becomes evident at this point. The Navy "A" school environment provided a unique opportunity for studying these stress-related issues. Most "A" school students are assigned to these schools directly from boot camp. They live and work together within the physical confines of the school and must adapt to the rigid conformity and discipline demanded by military school life. Students must develop strategies and adapt to changes in life patterns in order to cope effectively with their new situation. For these young people, the Navy represents a new job and, for many, Navy training is their first major experience away from home as an adult. More important, the adaptability their new environment demands exacts a price and may set the tone for the remainder of the person's Navy career.

Another stress-related issue that was addressed in the present study is the commonly held view that pressure and demands of the environment invariably produce negative effects on individual motivation and performance. Hall and Lawler (1971) have taken

issue with this position. They argue that pressure, while negative under certain circumstances, can be useful, both to the organization and to the individual under other circumstances. Similarly, Marshall (1978) has studied stress at executive levels with the perspective that the potential benefits of pressure or short-term stress must be acknowledged and that both job stress and satisfaction must be understood to achieve a comprehensive view of an individual's working life. Thus, it is important to determine those aspects that are dysfunctional to the individual and those that are challenging or helpful.

Purpose

The purposes of this study were (1) to determine the nature of stresses and challenges affecting students in Navy "A" schools, (2) to determine the extent to which male and female students differ with regard to stresses and challenges, and (3) to determine the impact of environmental and personal variables on stresses and challenges and the resulting affective and behavioral outcomes by means of a preliminary causal model.

APPROACH

Stress Model

A review of the organizational stress literature reveals that a formidable list of causal factors of stress, as well as the moderating and outcome variables involved, have been identified by researchers. Parasuraman and Alutto (1978) call for an integrated approach in which a causal basis or causal sequence of the relationships between stresses and outcomes are verified empirically. In the present study, a preliminary model of stress with implied causal links among the variables was proposed (Figure 1) and tested through path analysis. The variables incorporated in the present model have been proposed in the stress literature (e.g., Beehr & Newman, 1978). In this model, environmental and personal variables represent the exogenous variables. Sources of stress and felt impact are assumed to be influenced by these antecedent variables. Felt impact is treated as a moderator variable that influences level of psychosomatic complaints and satisfaction, which, in turn, influence organization commitment and performance.

Subjects and Procedure

A total of 240 students at three Navy "A" schools (for personnelman, yeoman, and storekeeper ratings) located in Meridian, Mississippi volunteered to participate as subjects for this study. Table 1 presents a breakdown of the number of students by school and by gender. The 240 participants ranged from 17 to 32 years of age ($X = 20.70$, $S.D. = 3.58$), and 84 percent had graduated from high school. The sample was composed of 65 percent Caucasian, 28 percent Black, and about 7 percent "other" (e.g., Filipino, Hispanic). Almost 65 percent came from a home town with a population of less than 100,000.

Description of "A" School

The "A" schools from which the subject population was drawn are training schools where enlisted personnel learn a specific trade or function to be utilized in future Navy assignments. Generally, "A" school populations are made up of recruits who have just completed their Navy basic training and have been assigned to specific schools on the basis of a battery of screening tests (Armed Services Vocational Aptitude Battery), including tests on mathematics, verbal, and spatial relationships. Depending on current Navy needs, as individual qualifying for several different schools, on the basis of test battery results, is usually placed in the school that he/she most prefers.

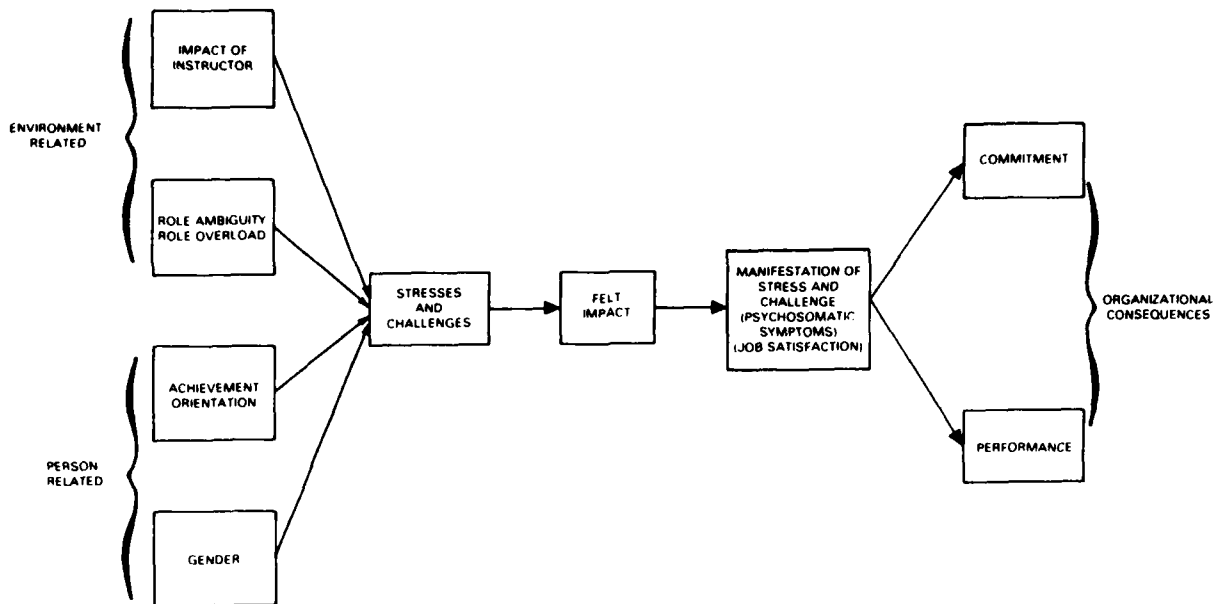


Figure 1. Path model of organizational stress.

Table 1
Number of Male and Female Subjects in
Each "A" School

"A" School	Men	Women	Total
Personnelman	43	10	53
Yeoman	87	33	120
Storekeeper	54	13	67
Total	184	56	240

All three of the "A" schools in the present study use a self-paced instruction format. While in the school training environment, students typically march to and from class in groups, live together in dormitories, and are required to perform other duties (e.g., stand watch, clean quarters, etc.).

Research Instrument

The research instrument consisted of items assessing environmental factors, personal factors, sources of stress, and challenge and outcome variables. All of the variables measured were taken from the conceptual frameworks of Beehr and Newman (1978), McGrath (1976), and Rizzo, House, and Lintzman (1970). In addition, the instructor's evaluations of individual student performance were used as measures of student school performance. The variables measured are described below:

1. Environmental variables. Measures of role stress were included to assess perceptions of conflicting pressures and clarity of responsibilities in "A" school. These

were taken from the scale developed by Rizzo et al. (1970). Two factors, ambiguity and conflict-overload, were derived from a factor analysis of the items (see Table 2). An 18-item instructor attention scale, which was developed for this study, was also used to assess respondents' perceptions of instructor behaviors. Two factors, nonsupportive instructor and close supervision, were derived from a factor analysis of these items (see Table 2).

Table 2
Results of Factor Analysis of Role Stress and
Instructor Attention Items

Factor	Questionnaire Item	Loading
Role Stress		
Ambiguity	Know if your appearance will be acceptable.	.61
	Know what other people want of you.	.54
	Explanations clear about what has to be done.	.50
	Feel certain how you will be evaluated.	.50
	Know what your responsibilities are.	.49
Conflict-overload	Seems like you have too much to do.	.73
	Performance standards too high.	.65
	Given enough time to do what's expected.	-.45
	People ask you to do things which get in way of your performance.	.42
Instructor Attention		
Nonsupportive Instructor	Doesn't take a personal interest in me.	.73
	Spends little time encouraging me.	.71
	Won't go out of way to help.	.67
	Doesn't compliment me when I do well	.65
	Can't discuss my personal problems with superiors.	.65
	Do not know me very well.	.59
	Tends to talk down to me.	.58
	Won't stand up for me.	.56
	Doesn't explain things to me.	.55
	Criticizes me over minor things.	.48
	Do not feel free to ask a question.	.47
	Discourages my criticism.	.43
Close Supervision	Doesn't expect much of me.	.30
	Always checks on me.	.70
	Keeps close watch on me.	.63
	Criticizes me over minor things.	.42

2. Personal variables.

a. The demographic measures included were: age, sex, education level, parents' education and occupational levels, ethnic background, birth order, and size of home town.

b. Personality measures were assessed using 14 scales from Gough and Heilbrun's (1965) 300-item Adjective Checklist (ACL). These scales were: (1) defensiveness, (2) number of favorable adjectives checked, (3) number of unfavorable adjectives checked, (4) self-confidence, (5) self-control, (6) ability, (7) personal adjustment, (8) achievement, (9) endurance, (10) dominance, (11) orderliness, (12) affiliation, (13) autonomy, and (14) aggressiveness. The ACL raw scores for each of the scales were converted to T scores for the male and female subsamples in accordance with the procedures outlined by Gough and Heilbrun (1965). One scale, that for achievement, was selected as one of the personal variables included in the path analysis model since this motivational variable has been of central concern in studies on school performance (Weiner, 1970).

3. Source of Stress and Challenge. Stress was assessed by having students list up to five specific things they perceived to be stressful or upsetting to them. In a similar fashion, students listed those things in their training which they perceived to be challenging. Six judges categorized the responses to each question.

4. Impact on Self. The Subjective Stress Scale of Schar, Reeder, and Dirken (1973) was modified and used as a measure of the negative impact that "A" school experience had on students. A four-item positive impact scale was also developed for this study and used to assess the positive ramifications of the "A" school experience. Such outcomes as challenge and the opportunity to learn new skills were included in the positive impact scale. Impact items were factor analyzed. The factors and factor loadings for the impact items are presented in Table 3.

Table 3
Results of Factor Analysis of Negative and Positive Impact Items

Factor	Questionnaire Item	Loading
Negative impact	Great amount of strain with daily activities.	.76
	Daily activities are trying--stressful.	.73
	Since "A" school, (I am) usually tense and nervous.	.67
	At end of day, completely physically exhausted.	.63
	At end of day, completely mentally exhausted.	.62
Positive impact	Gives opportunity to learn new skills.	.81
	Made me more aware of abilities.	.76
	High payoff for me to try and do better.	.67
	"A" school is challenging	.64

5. Psychosomatic Symptoms. A scale measuring reported psychosomatic symptoms such as restlessness and headaches (Gurin, Veroff, & Feld, 1960) was included to assess manifestations of stress. Items were scored in accordance with procedures specified by the test authors.

6. Satisfaction. Satisfaction was measured by items that were developed for use in Navy training research (Landau, Farkas, & Wagner, 1980). These items measured satisfaction with such dimensions as training, Navy life in general, and climate. These items were factor analyzed; the factors and factor loadings are included in Table 4.

Table 4
Factor Loadings for Satisfaction with
Navy Training and Commitment Factors

Factor	Questionnaire Item	Loading
Satisfaction	Satisfied with the training I am getting.	.81
	Satisfied with my training.	.69
	Not bored with my training.	.67
	"A" school is a valuable experience.	.61
	Opportunity to improve quality of my life.	.59
	So far, I'm generally satisfied with the Navy.	.52
	Satisfied with Navy benefits.	.40
	Satisfied with pay.	.37
Commitment	Satisfied with "A" school work duties.	.35
	Talk up the Navy to my friends.	.67
	Feel much loyalty to the Navy.	.66
	Proud to tell others I'm in the Navy.	.66
	I care about what happens to the Navy.	.65
	My values and the Navy's are similar.	.64
	Navy inspires best in my performance.	.60
	Put forth effort beyond normal to make Navy successful.	.60
	Navy is best of all organizations to be with	.55
	Would accept any assignment to keep with the Navy.	.53

7. Commitment. A group of 14 items was taken from the commitment scale of Porter, Crampin, and Smith (1976) and adapted to the Navy setting. These items were factor analyzed; the factors and factor loadings are included in Table 4.

8. Instructor's Evaluation of Student Performance. Instructors were asked to evaluate, on a five-point scale, each student's performance relative to the average student in "A" school (1 = very much below average, 3 = average, 5 = very much above average).

Procedure

After the study's purposes and procedures had been explained, the students completed the questionnaire. Questionnaires were administered in small class groups within the three "A" schools.

8. What does your father do for a living? _____
9. What does your mother do for a living? _____
10. How many brothers and/or sisters do you have _____ brothers _____ sisters
11. What is your birth order? (first born, the third born, etc.) _____
12. Please circle the number which best describes the population of your hometown.
1. Less than 5,000
 2. 5,000 to 20,000
 3. 20,001 to 100,000
 4. 100,001 to 1,000,000
 5. More than 1,000,000

On the following items, please circle the number on the scale which best describes your feelings.

13. How important is it to you to know, in detail, what you have to do in training?
- | | | | | |
|---------------|-----|----------------------|-----|----------------|
| not important | | moderately important | | very important |
| (1) | (2) | (3) | (4) | (5) |
14. How important is it to you to know, in detail, how you are supposed to do a job?
- | | | | | |
|---------------|-----|----------------------|-----|----------------|
| not important | | moderately important | | very important |
| (1) | (2) | (3) | (4) | (5) |
15. How important is it to you to know, in detail, what your superiors can make you do and what they can't.
- | | | | | |
|---------------|-----|----------------------|-----|----------------|
| not important | | moderately important | | very important |
| (1) | (2) | (3) | (4) | (5) |
16. How important is it to you to know how well you are doing in training?
- | | | | | |
|---------------|-----|----------------------|-----|----------------|
| not important | | moderately important | | very important |
| (1) | (2) | (3) | (4) | (5) |

In answering the following items, circle the one answer which best describes your feelings.

17. Is your everyday life at A-school filled mostly by
1. not enough things to keep you interested or busy?
 2. a rather predictable routine of events?
 3. challenges needing to be met?
 4. problems needing solution?
18. When you are under pressure or stress, do you usually
1. Plan carefully before taking any action?
 2. Do something about it immediately?
19. When you have to wait in line, such as at a restaurant, a store, or the post office, do you
1. accept it calmly?
 2. feel impatient but do not show it?
 3. feel so impatient that someone watching could tell you were restless?
 4. refuse to wait in line, and find ways to avoid such delays?
20. Nowadays, do you consider yourself to be
1. definitely relaxed and easy going?
 2. probably hard-driving and competitive?
 3. definitely hard-driving and competitive?

BACKGROUND

1. Please fill in your social security number _____
2. What is your name? _____
3. What is your age? _____
4. What is your education level? (Circle the highest grade completed)
 1. Some elementary school (grades 1 to 7)
 2. Completed elementary school (8 grades)
 3. Some high school (9 to 11 years)
 4. Graduated from high school or General Educational Development (GED)
 5. Some college or technical training beyond high school (1 to 3 years)
 6. Graduated from college or university (B.A., B.S., or other bachelor's)
 7. Some graduate school
5. What is your current marital status? (Circle one answer only)
 1. Single (never married; not engaged)
 2. Married
 3. Engaged
 4. Divorced
 5. Separated
 6. Other
6. What is your father's education level? (Circle the highest grade completed)
 1. Some elementary school (grades 1 to 7)
 2. Completed elementary school (8 grades)
 3. Some high school (9 to 11 years)
 4. Graduated from high school or General Educational Development (GED)
 5. Some college or technical training beyond high school (1 to 3 years)
 6. Graduated from college or university (B.A., B.S., or other bachelor's)
 7. Some graduate school
 8. Advanced Degree
 9. I don't know
7. What is your mother's education level? (Circle the highest grade completed)
 1. Some elementary school (grades 1 to 7)
 2. Completed elementary school (8 grades)
 3. Some high school (9 to 11 years)
 4. Graduated from high school or General Educational Development (GED)
 5. Some college or technical training beyond high school (1 to 3 years)
 6. Graduated from college or university (B.A., B.S., or other bachelor's)
 7. Some graduate school
 8. Advanced degree
 9. I don't know

APPENDIX

NAVY TRAINING QUESTIONNAIRE

PRIVACY ACT NOTICE

Under the authority of 5USC301, information regarding your background, attitudes, experiences, and expectations of the Navy is requested to provide input to a study on the effects of training. The information provided by you will not become part of your official record, nor will it be used to make decisions about your future in the Navy in any way. It will be used by the Navy Personnel Research and Development Center for statistical purposes only. You are not required to provide this information. There will be no adverse consequences should you elect not to provide the requested information or any part of it.

INSTRUCTIONS

The following questionnaire is being distributed to a sample of Navy students at "A" schools. Its purpose is to identify and document the concerns and experiences of Navy personnel as they relate to training experiences. Your frank, honest, and forthright answers on the questionnaire are encouraged. Your name and social security number are requested to provide a basis for an evaluation of personal concerns. The provisions of the Privacy Act will be strongly enforced.

Some of the questions may appear to be personal in nature. They are necessary to obtain a full and accurate picture of the factors affecting your experience in training. However, if any question appears unreasonably personal or too intrusive into your privacy, please omit it and continue with the balance of the questionnaire.

Thank you for your assistance. Please mark your answers on the questionnaire itself, following the directions given at the beginning of each section.

APPENDIX
NAVY TRAINING QUESTIONNAIRE

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questions. Also, they were less inclined to view their instructors as nonsupportive, reported greater commitment, and were higher on their performance than were males.

Overall, the results of this study provide tentative support for a multi-dimensional model of stress. The path analysis results provide partial support for the proposed causal structure. Environmental as well as personal characteristics were found to directly influence positive and negative impact or felt challenge and stress. Role overload, for example, was a very strong contributor to felt stress. This observed effect, along with the relationship of nonsupportive instructors to perceived impact, tends to support Buck's (1972) contention that the element of perceived lack of control renders a particular situation stressful. The obtained relationships also point to the buffering effect of supportive instructors and the exacerbating effect of nonsupportive instructors. Another finding of interest is that there were no sex differences with respect to felt stress but there was a difference for felt challenge and evaluation of performance, as indicated in the previous paragraph.

A major finding of this study is that positive and negative impact are key predictors of satisfaction and psychosomatic symptoms respectively and they in turn predict commitment to the Navy. This is supportive of Schuler's (1980) propositions concerning constraint stress and opportunity stress. This causal structure did not obtain for performance. Performance was primarily influenced by environmental factors (role overload and role ambiguity) and personal attributes (achievement orientation and gender). Thus, felt stress and challenge appear to have little effect on "A" school performance but may have substantial influence on behavior relevant to a broader time frame (specifically, their performance on future assignments and their intention to make the Navy a carrier).

Two cautionary points must be made regarding the causal model. First, the size of the residual for performance indicates that important explanatory variables are missing from this analysis. Second, given the exploratory nature of this analysis, no attempt was made to trim or refine the model by adding or eliminating variables.

The differences in the profiles of high and low performers have implications for selection and training and suggest further research employing personality variables in training situations. As will be recalled, above average performers were significantly higher than below average performers on defensiveness, self control, achievement, order, and endurance scales. The high performer, as derived from the individual scales, is apt to be more self-controlled and resolute, tactful, responsive to his/her obligations, determined to do well, and persevering than is the low performer. This pattern is particularly interesting in view of the fact that the students' instructors evaluated them in terms of their performance. This suggests that, as seen through the eyes of the instructor, performance was linked to a complex of personality and need dimensions.

The current study may provide a useful starting point for the development and testing of explicit models of stress and challenge, their antecedents and outcomes in the context of Navy "A" schools. Future research might consider testing this model or variations in a longitudinal framework. Also, these models may be studied in environments that are less school oriented.

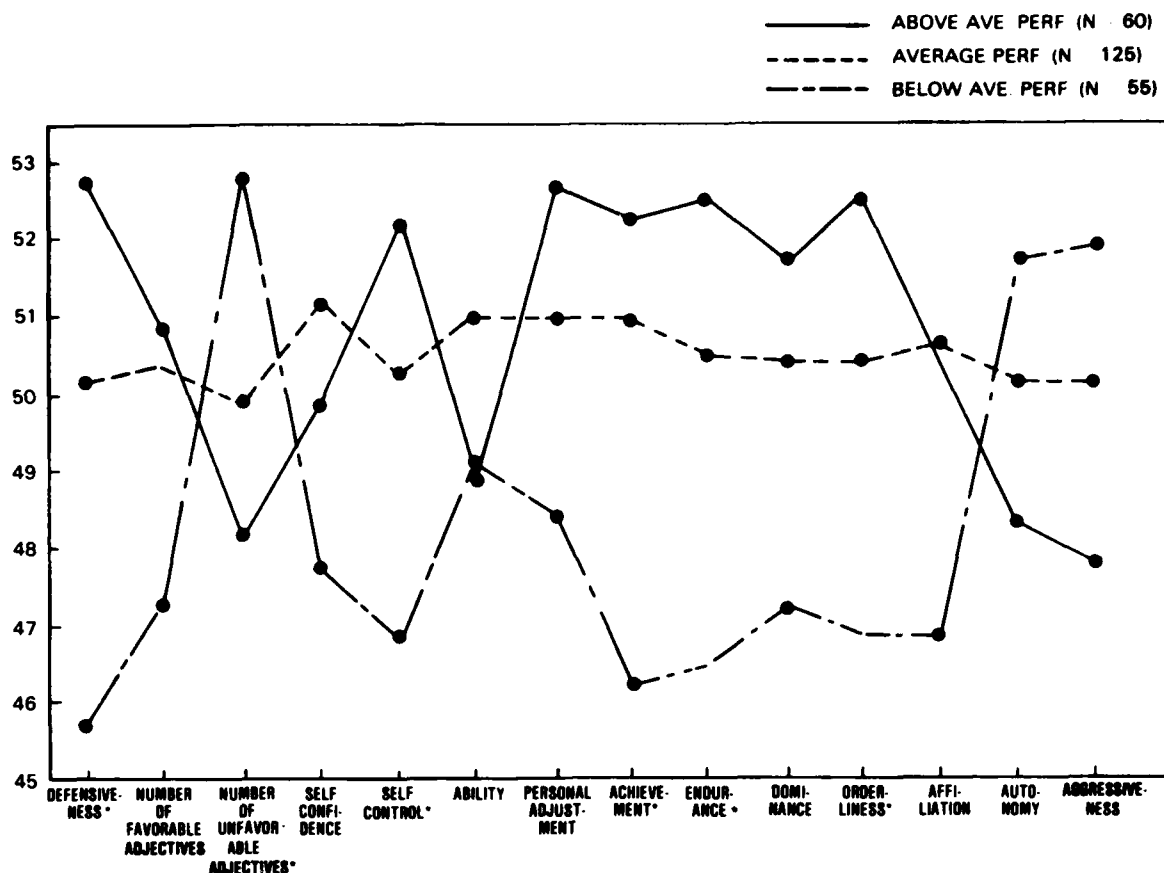


Figure 5. Profile pattern of above average, average, and below average performers.

DISCUSSION AND CONCLUSIONS

There were three major aims of the current study. The first aim was to determine the nature of stresses and challenges affecting "A" school students. School demands (e.g., time constraints) and military atmosphere were nominated as the two major sources of stress. On the other hand, certain aspects of school work (e.g., learning and understanding a subject) were regarded as the major sources of challenge. These findings are supportive of the position taken by Hall and Lawler (1971) that demands made on an individual may be regarded as pressures that, depending on certain operating factors, may be bad or may be useful both to the individual and the organization.

These findings also bear on the second aim of the study, which was to ascertain the degree to which male and female students differed with respect to the perceived stresses and challenges. No differences were found between men and women in terms of the kinds of stresses and challenges they felt affected them. Furthermore, the proportion of women who identified an aspect of the "A" school environment as either stressful or challenging did not differ from that of men. This held for every category of stress and challenge. Thus, it would appear that, in the "A" school context, men and women are confronted with similar stresses and challenges.

There is some evidence that female students adapted better to the "A" school environment than did male students. For example, female students regarded their "A" school experience as more positive, as evidenced by their responses to the positive impact

Turning to the relationship of the exogenous variables to negative impact, the path analysis shows that two of the environmental factors, nonsupportive instructor and role overload, are direct contributors to felt negative impact, as is low achievement orientation as indicated by the path coefficient of $-.204$. Negative impact ($.380$), in turn, along with low achievement orientation ($-.193$), directly affect psychosomatic symptoms.

Finally, the variables with the most salient direct influences on commitment are three endogenous variables: Satisfaction ($.283$), positive impact ($.144$), psychosomatic symptoms ($-.129$), and two exogenous variables, nonsupportive instructor ($-.154$) and role overload ($-.112$). The results show that the model as a whole explains 31 percent of the variance in commitment. The strongest direct paths to performance involve exogenous variables: role ambiguity ($-.221$), gender ($.214$), low achievement orientation ($.162$), and role overload ($-.129$). None of these variables were channeled through positive impact, negative impact, satisfaction, or psychosomatic symptoms. The model explains 17 percent of the variance in performance.

ACL Profiles of Above Average, Average and Below Average Performers

As the path analysis has shown, achievement orientation has a direct impact on performance. In addition to achievement, 13 additional scales from the ACL were assessed. One question of interest was whether the overall ACL profiles of above-average performers differed from those of below-average performers. Respondents were grouped according to the instructor's evaluations of the student's performance. Fifty-two percent of the students fell into the average performance category, with 23 and 25 percent of the students comprising the below average and above average groups. Figure 5 illustrates the similarities and differences between these three groups on the 14 ACL scales. As can be seen, for all but one of the scales, the largest differences obtained were those between above-average and below-average performers. Statistically significant differences were obtained for six of the scales: defensiveness, number of unfavorable adjectives, self control, achievement, endurance, and orderliness. These results indicate that the profiles of the high performers differed substantially from those of the poor performers.

Table 8
Simple and Multiple Correlations of Stresses
and Challenges with Negative Impact and Positive Impact

Variable	Simple r	Multiple R
Negative Impact		
Homework and school demands (S)	.23	.23
Military atmosphere (S)	.12	.27
Finish early (C)	-.13	.29
Get along with instructor (S)	.08	.31
Instructor's attitude (S)	.11	.32
"A" school incentives (C)	-.09	.33
Positive Impact		
Nothing challenging (C)	-.29	.29
Instructor's attitude (S)	-.14	.32
Homework and school demand (S)	.14	.35
Dealing with new people (C)	.14	.37
Military atmosphere (S)	-.15	.39
School (C)	.14	.40

Note. (S) indicates stress and (C), challenge.

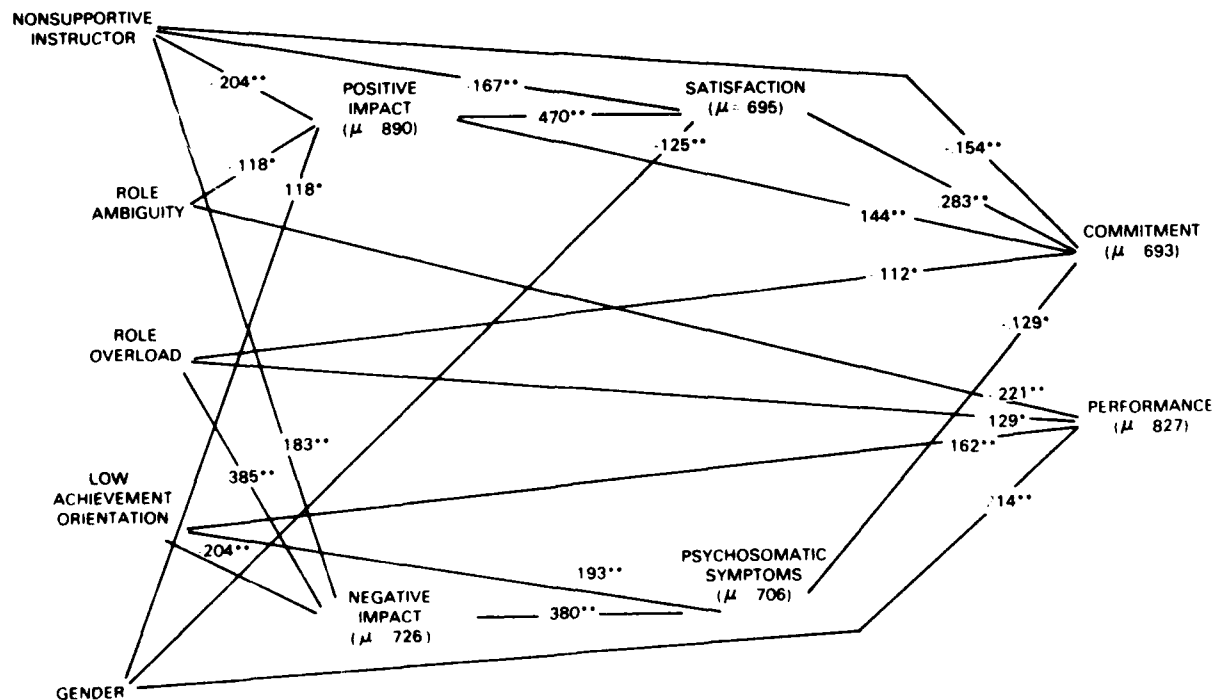


Figure 4. Path diagram of antecedents and outcomes of stress and challenge.

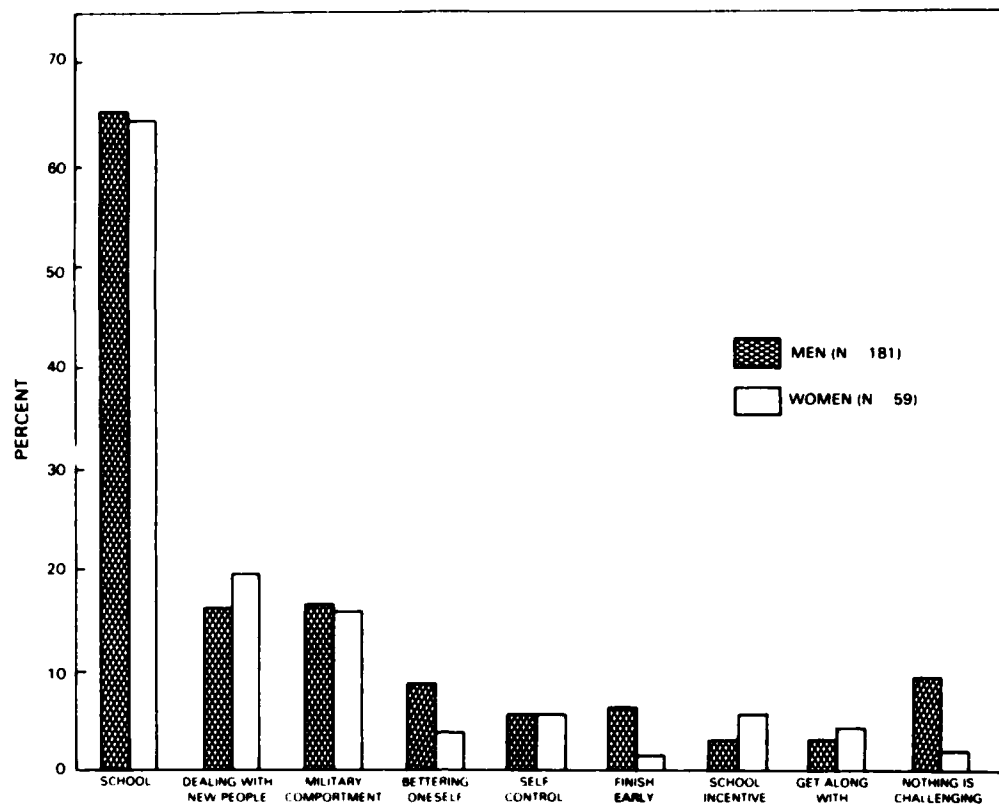


Figure 3. Sources of challenge. A comparison of the percent of men and women responding to each category.

Table 7
Means and F Values from Analyses of Variance
on Gender Effects for the Major Variables

Variable	Mean		F Value
	Men	Women	
Nonsupportive Instructor	.09	-.31	7.99*
Role Ambiguity	.03	-.11	1.32
Role Overload	.04	-.11	1.26
Achievement Orientation	49.99	49.78	.02
Positive Impact	-.09	.28	7.37*
Negative Impact	-.01	.00	.00
Satisfaction	-.00	.01	.01
Psychomatic Symptoms	3.60	3.57	.00
Commitment	-.08	.26	6.82*
Rated Performance	2.85	3.38	17.15**

*p < .01.

**p < .001.

Table 6

Sources of Stress and Challenge Categories:
Percent of Total Responses

Category	Percent
Source of Stress (N = 344)	
Homework and school demands	26.7
Military/boot camp atmosphere	26.7
Living environment	16.9
Instructor's attitudes	14.3
Homesickness	5.2
Boredom	4.7
Nothing	3.2
Ambiguity	2.0
Source of Challenge (N = 307)	
The school and schoolwork	50.5
Dealing with and meeting new people	13.4
Military comportment	13.0
Bettering myself	5.2
Nothing	4.9
Self-control	4.2
Finishing early	3.9
"A" school incentives	2.6
Getting along with instructors	2.0

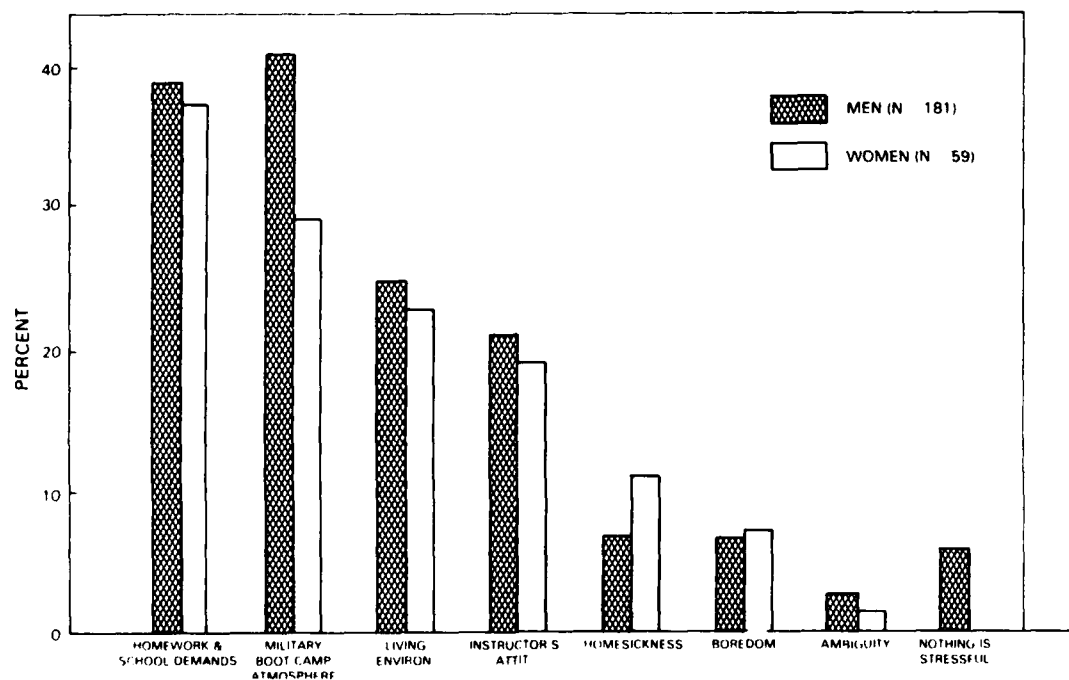


Figure 2. Sources of stress. A comparison of the percent of men and women responding to each category.

Table 5
Open-Ended Response Categories and Examples of Responses to
Questions on "A" School Sources of Stress and Challenge

Category	Sample Open-Ended Responses
Sources of Stress	
Military/boot camp atmosphere	Inspections like at boot camp. Having to be in uniform all day when I'm in duty section. Petty rules like marching to and from BEQ.
Homework and school demands	School work pressure. Not enough class time. Too many lessons.
Living environment	The food--same thing every day. Drunken roommates. No privacy.
Instructor's attitudes	Asking instructors for help and getting yelled at. The instructors won't help you--they just grade you. Favoritism by superiors.
Boredom	Nothing really to do. Being bored in "A" school. Same things to do every night.
Ambiguity	Not knowing where I'm going to go until the last minute. Incompleteness of information concerning future problems. Don't know enough to know what to do.
Nothing	Nothing. None. N/A
Homesickness	Being away from loved ones. Separation from family. Being away from home--feel alone.
Sources of Challenge	
The school and schoolwork	Schoolwork. Learning to type. Understanding what I'm learning.
Military compartment	Passing your inspections. Learning Navy regulations and life-style. Keeping a military appearance.
Dealing with/meeting new people	Trying to get along with so many women. Trying to cope with so many people. Competition with the opposite sex.
Self-control	Keeping my temper with the instructors. Self-control. To control boredom.
Bettering myself	New opportunity to advance. Beginning a career. Becoming something.
"A" school incentives	Being class P.O. Finishing school with honors. I.P.O.—Instant Petty Officer.
Thinking beyond "A" school	Travel to new places. Thinking about my first duty station. Seeing the world.
Getting along with instructors	Trying to beat the teachers. The instructors. Getting along with your instructor.
Finishing early	Graduating early. Early and successful completion of "A" school. Completing my work ahead of schedule.
Nothing	There aren't very many things here that are challenging. None. Nothing.

RESULTS

Sources of Stress and Challenge

The 240 students generated 344 responses to the open-ended question on stress and 304 responses to the question on challenge. The judges who categorized the responses to each question created two final category schemes. Table 5 presents examples of responses that were sorted into each category and Table 6, the percentage of responses for each category. As can be seen, "homework and school demands" and "military boot camp atmosphere" are the two most frequently cited stressors, followed by "living environment" and "instructor's attitudes." "The school and school work" is the most frequently cited challenge.

Figures 2 and 3 depict the proportion of male and female responses for each category of stress and challenge. As can be seen, the percentages are virtually identical for men and women students for the majority of the categories. The differences that are evident between men and women are not significant.

Comparison of Male and Female Students on Major Variables Comprising the Path Model

Table 7 presents the means and F values obtained from the analysis of variance performed on the variables that comprised the model. While no gender differences were evident from the students' perceptions concerning the stressful and challenging aspects of their training, significant differences between men and women were obtained for four of the ten measures featured in the path model. Women students were less likely to perceive their instructors as nonsupportive than were men. Women viewed "A" school experience in a significantly higher level of commitment to the Navy than did men and their "A" school performance was rated significantly higher. No statistically significant gender differences were obtained from any of the other measures.

Path Model

In order to simplify the path model, multiple correlations were conducted relating sources of stress and challenge that were generated by the students in response to the open-ended questions to felt negative and positive impact. As shown in Table 8, stress associated with "homework and school demands" most strongly related to negative impact whereas "nothing challenging" was most strongly related to positive impact. Those students who could find nothing challenging reported less positive impact from "A" school. Interestingly, "homework and school demands" correlated significantly with both negative and positive impact.

Negative and positive impact were orthogonal to one another ($r = -.03$). The path model (see Figure 4) was constructed so that nonsupportive instruction, role overload, role ambiguity, achievement orientation, and gender were the exogenous variables. Positive and negative impact constituted parallel first level endogenous variables. Satisfaction is viewed as the first level outcome of positive impact and psychosomatic symptoms as the first level outcome to negative impact. Satisfaction and psychosomatic symptoms were expected to affect the two final outcome measures, commitment and performance.

Focusing first on the relationship of the exogenous variables to positive impact, it can be seen from Figure 4 that nonsupportive instructor (-.204) and, to a lesser extent, role ambiguity (-.118) are inversely related to positive impact whereas gender is positively related (.118) (i.e., women reported greater positive impact than men). Moving to the next stage in the causal scheme, positive impact directly influences satisfaction (.470).

CIRCLE THE ONE ANSWER THAT BEST DESCRIBES YOUR FEELINGS.

- | | |
|--|---|
| 21. Would people who know you well agree that you tend to get irritated easily? | 24. Would people who know you well agree that you don't have much fun in your life? |
| 1. Definitely no | 1. Definitely no |
| 2. Probably no | 2. Probably no |
| 3. Probably yes | 3. Probably yes |
| 4. Definitely yes | 4. Definitely yes |
| 22. Would people who know you well agree that you tend to do most things in a hurry? | 25. How is your temper? |
| 1. Definitely no | 1. I almost never get angry |
| 2. Probably no | 2. No problem |
| 3. Probably yes | 3. Strong, but controllable |
| 4. Definitely yes | 4. Fiery, hard to control |
| 23. Would people who know you well agree that you enjoy "a contest" (competition) and try hard to win? | |
| 1. Definitely no | |
| 2. Probably no | |
| 3. Probably yes | |
| 4. Definitely yes | |

IN EACH OF THE FOLLOWING QUESTIONS, PLEASE COMPARE YOURSELF WITH THE AVERAGE STUDENT. (CIRCLE THE NUMBER NEXT TO THE PHASE THAT MATCHES YOUR FEELINGS)

26. In amount of effort put forth, I give
1. Much less effort than the average student.
 2. A little less effort than the average student.
 3. A little more effort than the average student.
 4. Much more effort than the average student.
27. In sense of responsibility, I am
1. Much less responsible than the average student.
 2. A little less responsible than the average student.
 3. A little more responsible than the average student.
 4. Much more responsible than the average student.
28. I find it necessary to hurry
1. Much less of the time than the average student.
 2. A little less of the time than the average student.
 3. A little more of the time than the average student.
 4. Much more of the time than the average student.
29. I approach life in general
1. Much less seriously than the average student.
 2. A little less seriously than the average student.
 3. A little more seriously than the average student.
 4. Much more seriously than the average student.

Each of the following items consists of a pair of alternatives numbered 1 or 2. Please select the one statement of each pair (and only one) which you believe to be the case as far as you're concerned. Be sure to select the one you actually believe to be more true rather than the one you think you should choose or the one you would like to be true.

30. 1. In my case, getting what I want has little or nothing to do with luck.
2. Many times I might just as well decide what to do by flipping a coin.
31. 1. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.
2. I have often found that what is going to happen will happen.
32. 1. When I make plans, I am almost certain that I can make them work.
2. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.
33. 1. It is impossible for me to believe that chance or luck plays an important role in my life.
2. Many times I feel that I have little influence over the things that happen to me.
34. 1. What happens to me is my own doing.
2. Sometimes I feel that I don't have enough control over the direction my life is taking.

Listed below are a number of events which sometimes bring about change in the lives of those who experience them and which necessitate social readjustment. For each item below, please indicate the extent to which you view the event as having either a positive or negative impact on your life. A rating of 1 would indicate an extremely negative impact. A rating of 4 suggests no impact either positive or negative. A rating of 7 would indicate an extremely positive impact. If an item is not applicable to your situation, mark "0".

not applicable	extremely negative	moderately negative	somewhat negative	no impact	slightly positive	moderately positive	extremely positive
0	1	2	3	4	5	6	7

35. Change in people I'm associated with _____
36. Change in sleeping habits _____
37. Change in eating habits _____
38. Personal achievement _____
39. New job _____
40. Change in financial status _____
41. Change in work situation _____

Please indicate the extent to which you view the event as having either a positive or a negative impact on your life.

not applicable	extremely negative	moderately negative	somewhat negative	no impact	slightly positive	moderately positive	extremely positive
0	1	2	3	4	5	6	7

42. Change in closeness of family members _____
43. Change in residence _____
44. Separation from mate/boyfriend or girlfriend _____
45. Change in church activities _____
46. Change in usual type and/or amount of recreation _____
47. Change in social activities, e.g., parties, movies, visiting _____
48. Change in living conditions _____
49. Ending of formal schooling _____
50. Leaving home for the first time _____
51. Beginning a new training experience _____
52. Joining the Navy _____
53. Change in amount of privacy _____

On the following scales please indicate the extent to which you feel capable of successfully dealing with or coping with the following situations at the present time.

54. Stressful situations in general
not at all 1 2 3 4 5 6 7 extremely well
55. The way I'm treated by my superiors
not at all 1 2 3 4 5 6 7 extremely well
56. A-school training situations with the opposite sex
not at all 1 2 3 4 5 6 7 extremely well
57. A-school training situations with the same sex
not at all 1 2 3 4 5 6 7 extremely well
58. Test taking situations
not at all 1 2 3 4 5 6 7 extremely well
59. Public speaking situations
not at all 1 2 3 4 5 6 7 extremely well

INDICATE THE EXTENT TO WHICH YOU FEEL CAPABLE OF SUCCESSFULLY DEALING OR COPING WITH THE EVENT.

60. Social situations with the opposite sex

not at all 1 2 3 4 5 6 7 extremely well

61. Social situations with the same sex

not at all 1 2 3 4 5 6 7 extremely well

62. A-school life in general

not at all 1 2 3 4 5 6 7 extremely well

There are some things at A-school that can be stressful or upsetting. There are also things that are challenging. Sometimes they may be the same thing. Please list first those things which are stressful/upsetting to you and then those things at A-school which are challenging to you.

63. What things in training are stressful/upsetting to you?

- A. _____
- B. _____
- C. _____
- D. _____
- E. _____

64. What things in training are challenging to you?

- A. _____
- B. _____
- C. _____
- D. _____
- E. _____

LEADERSHIP ATTENTION

The following items refer to your superiors (i.e., your company commander and instructors).

PLEASE SHOW HOW MUCH YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS BY CHOOSING THE APPROPRIATE NUMBER FOR EACH QUESTION USING THE FOLLOWING SCALE

STRONGLY DISAGREE	DISAGREE	UNCERTAIN	AGREE	STRONGLY AGREE
1	2	3	4	5

65. _____ My superiors tend to talk down to me.

66. _____ My superiors don't usually compliment me when I do something well.

PLEASE SHOW HOW MUCH YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS BY CHOOSING THE APPROPRIATE NUMBER FOR EACH QUESTION USING THE FOLLOWING SCALE

STRONGLY DISAGREE	DISAGREE	UNCERTAIN	AGREE	STRONGLY AGREE
1	2	3	4	5

67. ___ My superiors discourage my criticism.
68. ___ My superiors keep a rather close watch on me.
69. ___ My superiors often criticize me over minor things.
70. ___ My superiors encourage me to rely on myself when a problem arises.
71. ___ I generally don't feel free to ask a question.
72. ___ My superiors always check on me and supervise me very closely.
73. ___ My superiors expect too much from me.
74. ___ I can't discuss my personal problems with my superiors.
75. ___ My superiors won't stand up for me.
76. ___ My superiors spend very little time encouraging me.
77. ___ My superiors won't go out of their way to help me.
78. ___ My superiors don't know me very well.
79. ___ My superiors don't explain things to me.
80. ___ My superiors don't take a personal interest in me.
81. ___ My superiors don't expect much of me.
82. ___ My superiors sometimes get angry with me.
83. ___ Since coming to A-school, in general, I am usually tense or nervous.
84. ___ There is a great amount of nervous strain connected with my daily activities; I am always under pressure.
85. ___ At the end of the day I am completely physically exhausted.
86. ___ My daily activities are extremely trying and stressful.
87. ___ At the end of the day I am completely mentally exhausted.
88. ___ A-school is challenging work.
89. ___ There is a high payoff for me in my training to try to do better.
90. ___ A-school gives me the opportunity to learn new skills and techniques.
91. ___ A-school has made me more aware of my own abilities.

CIRCLE THE NUMBER NEXT TO THE PHRASE WHICH BEST REPRESENTS YOUR FEELINGS FOR EACH OF THE FOLLOWING ITEMS.

92. To what extent do you experience conflicting orders and guidelines in A-school?
1. To a very great extent.
 2. To a large extent.
 3. To some extent.
 4. To a small extent.
 5. Not at all.
93. To what extent do you do things that are likely to be accepted by one superior and not accepted by another?
1. To a very great extent.
 2. To a large extent.
 3. To some extent.
 4. To a small extent.
 5. Not at all.
94. To what extent do you know if your performance will be acceptable to your instructors?
1. To a very great extent.
 2. To a large extent.
 3. To some extent.
 4. To a small extent.
 5. Not at all.
95. To what extent is it difficult to satisfy everybody at the same time.
1. To a very great extent.
 2. To a large extent.
 3. To some extent.
 4. To a small extent.
 5. Not at all.
96. To what extent do people ask you to do things at A-school which get in the way of your performance.
1. To a very great extent.
 2. To a large extent.
 3. To some extent.
 4. To a small extent.
 5. Not at all.
97. To what extent do you know what your responsibilities are?
1. To a very great extent.
 2. To a large extent.
 3. To some extent.
 4. To a small extent.
 5. Not at all.

98. To what extent do you feel certain about how you will be evaluated?

1. To a very great extent.
2. To a large extent.
3. To some extent.
4. To a small extent.
5. Not at all.

99. To what extent do you know exactly what other people want of you?

1. To a very great extent.
2. To a large extent.
3. To some extent.
4. To a small extent.
5. Not at all.

100. To what extent are explanations clear about what has to be done?

1. To a very great extent.
2. To a large extent.
3. To some extent.
4. To a small extent.
5. Not at all.

101. To what extent are you given enough time to do what is expected of you?

1. To a very great extent.
2. To a large extent.
3. To some extent.
4. To a small extent.
5. Not at all.

102. To what extent does it seem like you have too much to do?

1. To a very great extent.
2. To a large extent.
3. To some extent.
4. To a small extent.
5. Not at all.

103. To what extent are the performance standards too high?

1. To a very great extent.
2. To a large extent.
3. To some extent.
4. To a small extent.
5. Not at all.

104. Do you feel weak all over much of the time?

1. Yes
2. No
3. Don't know

105. Have you had periods of days, weeks, or months when you couldn't take care of things because you couldn't "get going?"

1. Yes
2. No
3. Don't know

106. In general would you say that most of the time you are in high (very good) spirits, good spirits, low spirits, or very low spirits?

1. High
2. Good
3. Low
4. Very low
5. Don't know

107. Every so often do you suddenly feel hot all over?

1. Yes
2. No
3. Don't know

108. Have you ever been bothered by your heart beating hard?

1. Often
2. Sometimes
3. Never
4. Don't know

109. Would you say your appetite is poor, fair, good or too good?

1. Poor
2. Fair
3. Good
4. Too good
5. I don't know

110. Do you have periods of such great restlessness that you cannot sit long in a chair (cannot sit still very long)?

1. Yes
2. No
3. Don't know

111. Are you the worrying type (a worrier)?

1. Yes
2. No
3. Don't know

112. Have you ever been bothered by shortness of breath when you were not exercising or working hard?

1. Often
2. Sometimes
3. Never
4. Don't know

113. Are you ever bothered by nervousness (irritable, fidgety, tense)?

1. Often
2. Sometimes
3. Never
4. Don't know

114. Have you ever had any fainting spells (lost consciousness)?

1. Never
2. A few times
3. More than a few times
4. Don't know

115. Do you ever have any trouble in getting to sleep or staying asleep?

1. Often
2. Sometimes
3. Never
4. Don't know

116. Are you bothered by acid (sour) stomach several times a week?

1. Often
2. Sometimes
3. Never
4. Don't know

117. Does your memory seem to be all right (good)?

1. Yes
2. No
3. Don't know

118. Have you ever been bothered by "cold sweats"?

1. Often
2. Sometimes
3. Never
4. Don't know

119. Do your hands ever tremble enough to bother you?

1. Often
2. Sometimes
3. Never
4. Don't know

120. Do you seem to have a fullness (clogging) in your head or nose much of the time?

1. Yes
2. No
3. Don't know

121. Do you have personal worries that get you down physically (Make you physically ill)?

1. Yes
2. No
3. Don't know

122. Do you feel somewhat apart even among friends (apart, isolated, alone)?

1. Yes
2. No
3. Don't know

123. Do you feel that nothing ever turns out for you the way you want it to (turns out, happens, comes about, i.e., your wishes aren't fulfilled)?

1. Yes
2. No
3. Don't know

124. Are you ever troubled with headaches or pains in the head?

1. Often
2. Sometimes
3. Never
4. Don't know

125. Do you sometimes wonder if anything is worthwhile anymore?

1. Yes
2. No
3. Don't know

Indicate the extent to which you agree or disagree with each of the following statements regarding your overall attitudes toward the Navy. Circle the appropriate number for each statement.

	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
126. I am willing to put forth effort beyond that normally expected in order to help the Navy be successful.	1	2	3	4	5
127. I would talk up the Navy to my friends as a great organization to work for.		2	3	4	5

Indicate the extent to which you agree or disagree with each of the following statements regarding your overall attitudes toward the Navy. Circle the appropriate number for each statement.

	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
128. I feel much loyalty to the Navy.	1	2	3	4	5
129. I would accept almost any job assignment in order to keep working for the Navy.	1	2	3	4	5
130. I find that my values and the Navy's are very similar.	1	2	3	4	5
1 I am proud to tell others that I am in the Navy.	1	2	3	4	5
132. The Navy really inspires the best in me in the way of performance.	1	2	3	4	5
133. It would take a large change in my present circumstances to cause me to leave the Navy.	1	2	3	4	5
134. I am glad that I chose the Navy over other organizations I was considering at the time I enlisted.	1	2	3	4	5
135. There's much to be gained by sticking with the Navy.	1	2	3	4	5
136. I care about what happens to the Navy.	1	2	3	4	5
137. For me, the Navy is the best of all possible organizations to be with.	1	2	3	4	5

Indicate the extent to which you agree or disagree with each of the following statements regarding your overall attitudes toward the Navy. Circle the appropriate number for each statement.

	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
139. I would not leave the Navy if I had the chance.	1	2	3	4	5
139. Going through boot camp has not made me want to leave the Navy.	1	2	3	4	5
140. I feel depressed when I fail at something connected with my training.	1	2	3	4	5
141. I am very much involved personally in my training.	1	2	3	4	5
142. I am satisfied with my training.	1	2	3	4	5
143. Overall, A-school is a valuable experience.	1	2	3	4	5
144. In general, I am satisfied with the pay I'm getting.	1	2	3	4	5
145. So far, I'm generally satisfied with the Navy.	1	2	3	4	5
146. In general, I'm satisfied with the benefits the Navy provides (medical, insurance, etc.)	1	2	3	4	5
147. The Navy has provided me an opportunity to improve the quality of my life.	1	2	3	4	5
148. I am not bored with my training.	1	2	3	4	5
149. In general, I am satisfied with the training I am getting.	1	2	3	4	5
150. Overall, I like the way of life in A-school.	1	2	3	4	5

For each item below, please show how satisfied you are with the conditions at A-school. Circle the appropriate number for each item using the following scale.

	Extremely Dissatisfied	Dissatisfied	Neither Satisfied/nor Dissatisfied	Satisfied	Extremely Satisfied
151. Work duties	1	2	3	4	5
152. Living conditions	1	2	3	4	5
153. Helpfulness of superiors	1	2	3	4	5
154. Working as a team	1	2	3	4	5
155. Fairness of treat- ment	1	2	3	4	5
156. Recognition for doing well	1	2	3	4	5

JOINING THE NAVY AND COMING TO AN A-SCHOOL IS A MAJOR CHANGE IN YOUR LIFE STYLE AND LIVING SITUATION. WE ARE INTERESTED IN HOW DIFFERENT PEOPLE RESPOND TO THIS CHANGE. THE FOLLOWING ITEMS ASK YOU TO IDENTIFY THOSE PERSONS WHO YOU HAVE COME TO KNOW AT SCHOOL, AND WHO YOU FEEL HAVE BEEN ABLE TO HANDLE THIS NEW SITUATION.

157. Of the people you know in your class at A-school, which three would you say have adjusted most to life here?

A. _____

B. _____

C. _____

158. Of the people you know in your class at A-school, which three persons would you say have the greatest potential for leadership?

A. _____

B. _____

C. _____

159. Of the people you know in your class at A-school, which three persons would you say are most likely to make the Navy their life's career?

A. _____

B. _____

C. _____

160. Of the people in your class at A-school, which three persons would you say operate the best in stressful situations?

A. _____

B. _____

C. _____

161. Of the people you know in your class at A-school, which three persons would you say have the highest overall ability?

A. _____

B. _____

C. _____

PLEASE READ THIS LIST OF ADJECTIVES QUICKLY AND PUT AN X NEXT TO EACH ONE YOU WOULD CONSIDER TO BE SELF-DESCRIPTIVE. DO NOT WORRY ABOUT DUPLICATIONS, CONTRADICTIONS, AND SO FORTH. WORK QUICKLY AND DO NOT SPEND TOO MUCH TIME ON ANY ONE ADJECTIVE. TRY TO BE FRANK, AND CHECK THOSE ADJECTIVES WHICH DESCRIBE YOU AS YOU REALLY ARE, NOT AS YOU WOULD LIKE TO BE.

- | | | |
|-----------------------|------------------------|----------------------|
| ___ 1. absent-minded | 26. ___ capable | 51. ___ cowardly |
| ___ 2. active | 27. ___ careless | 52. ___ cruel |
| ___ 3. adaptable | 28. ___ cautious | 53. ___ curious |
| ___ 4. adventurous | 29. ___ changeable | 54. ___ cynical |
| ___ 5. affected | 30. ___ charming | 55. ___ daring |
| ___ 6. affectionate | 31. ___ cheerful | 56. ___ deceitful |
| ___ 7. aggressive | 32. ___ civilized | 57. ___ defensive |
| ___ 8. alert | 33. ___ clear-thinking | 58. ___ deliberate |
| ___ 9. aloof | 34. ___ clever | 59. ___ demanding |
| ___ 10. ambitious | 35. ___ coarse | 60. ___ dependable |
| ___ 11. anxious | 36. ___ cold | 61. ___ dependent |
| ___ 12. apathetic | 37. ___ commonplace | 62. ___ despondent |
| ___ 13. appreciative | 38. ___ complaining | 63. ___ determined |
| ___ 14. argumentative | 39. ___ complicated | 64. ___ dignified |
| ___ 15. arrogant | 40. ___ conceited | 65. ___ discreet |
| ___ 16. artistic | 41. ___ confident | 66. ___ disorderly |
| ___ 17. assertive | 42. ___ confused | 67. ___ dissatisfied |
| ___ 18. attractive | 43. ___ conscientious | 68. ___ distractible |
| ___ 19. autocratic | 44. ___ conservative | 69. ___ distrustful |
| ___ 20. awkward | 45. ___ considerate | 70. ___ dominant |
| ___ 21. bitter | 46. ___ contented | 71. ___ dreamy |
| ___ 22. blustery | 47. ___ conventional | 72. ___ dull |
| ___ 23. boastful | 48. ___ cool | 73. ___ easy going |
| ___ 24. bossy | 49. ___ cooperative | 74. ___ effeminate |
| ___ 25. calm | 50. ___ courageous | 75. ___ efficient |

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|----------------------|-------------------------|--------------------------|
| 76. ___egotistical | 102. ___good-looking | 128. ___ingenious |
| 77. ___emotional | 103. ___good-natured | 129. ___inhibited |
| 78. ___energetic | 104. ___greedy | 130. ___initiative |
| 79. ___enterprising | 105. ___handsome | 131. ___insightful |
| 80. ___enthusiastic | 106. ___hard-headed | 132. ___intelligent |
| 81. ___evasive | 107. ___hard-hearted | 133. ___interests narrow |
| 82. ___excitable | 108. ___hasty | 134. ___interests wide |
| 83. ___fair-minded | 109. ___headstrong | 135. ___intolerant |
| 84. ___fault-finding | 110. ___healthy | 136. ___inventive |
| 85. ___fearful | 111. ___helpful | 137. ___irresponsible |
| 86. ___feminine | 112. ___high-strung | 138. ___irritable |
| 87. ___fickle | 113. ___honest | 139. ___jolly |
| 88. ___flirtatious | 114. ___hostile | 140. ___kind |
| 89. ___foolish | 115. ___humorous | 141. ___lazy |
| 90. ___forceful | 116. ___hurried | 142. ___leisurely |
| 91. ___foresighted | 117. ___idealistic | 143. ___logical |
| 92. ___forgetful | 118. ___imaginative | 144. ___loud |
| 93. ___forgiving | 119. ___immature | 145. ___loyal |
| 94. ___formal | 120. ___impatient | 146. ___mannerly |
| 95. ___frank | 121. ___impulsive | 147. ___masculine |
| 96. ___friendly | 122. ___independent | 148. ___mature |
| 97. ___frivolous | 123. ___indifferent | 149. ___meek |
| 98. ___fussy | 124. ___individualistic | 150. ___methodical |
| 99. ___generous | 125. ___industrious | 151. ___mild |
| 100. ___gentle | 126. ___infantile | 152. ___mischievous |
| 101. ___gloomy | 127. ___informal | 153. ___moderate |

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|--------------------------|-----------------------|-------------------------|
| 154. ___modest | 181. ___practical | 208. ___rigid |
| 155. ___moody | 182. ___praising | 209. ___robust |
| 156. ___nagging | 183. ___precise | 210. ___rude |
| 157. ___natural | 184. ___prejudiced | 211. ___sarcastic |
| 158. ___nervous | 185. ___preoccupied | 212. ___self-centered |
| 159. ___noisy | 186. ___progressive | 213. ___self-confident |
| 160. ___obliging | 187. ___prudish | 214. ___self-controlled |
| 161. ___obnoxious | 188. ___quarrelsome | 215. ___self-denying |
| 162. ___opinionated | 189. ___queer | 216. ___self-pitying |
| 163. ___opportunistic | 190. ___quick | 217. ___self-punishing |
| 164. ___optimistic | 191. ___quiet | 218. ___self-seeking |
| 165. ___organized | 192. ___quitting | 219. ___selfish |
| 166. ___original | 193. ___rational | 220. ___sensitive |
| 167. ___outgoing | 194. ___rattlebrained | 221. ___sentimental |
| 168. ___outspoken | 195. ___realistic | 222. ___serious |
| 169. ___painstaking | 196. ___reasonable | 223. ___severe |
| 170. ___patient | 197. ___rebellious | 224. ___sexy |
| 171. ___peaceable | 198. ___reckless | 225. ___shallow |
| 172. ___peculiar | 199. ___reflective | 226. ___sharp-witted |
| 173. ___persevering | 200. ___relaxed | 227. ___shiftless |
| 174. ___persistent | 201. ___reliable | 228. ___show-off |
| 175. ___pessimistic | 202. ___resentful | 229. ___shrewd |
| 176. ___planful | 203. ___reserved | 230. ___shy |
| 177. ___pleasant | 204. ___resourceful | 231. ___silent |
| 178. ___pleasure-seeking | 205. ___responsible | 232. ___simple |
| 179. ___poised | 206. ___restless | 233. ___sincere |
| 180. ___polished | 207. ___retiring | 234. ___slipshod |

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|------------------------|-------------------------|--------------------|
| 235. ___ slow | 263. ___ tense | 291. ___ warm |
| 236. ___ sly | 264. ___ thankless | 292. ___ wary |
| 237. ___ smug | 265. ___ thorough | 293. ___ weak |
| 238. ___ snobbish | 266. ___ thoughtful | 294. ___ whiny |
| 239. ___ sociable | 267. ___ thrifty | 295. ___ wholesome |
| 240. ___ soft-hearted | 268. ___ timid | 296. ___ wise |
| 241. ___ sophisticated | 269. ___ tolerant | 297. ___ withdrawn |
| 242. ___ spendthrift | 270. ___ touchy | 298. ___ witty |
| 243. ___ spineless | 271. ___ tough | 299. ___ worrying |
| 244. ___ spontaneous | 272. ___ trusting | 300. ___ zany |
| 245. ___ spunky | 273. ___ unaffected | |
| 246. ___ stable | 274. ___ unambitious | |
| 247. ___ steady | 275. ___ unassuming | |
| 248. ___ stern | 276. ___ unconventional | |
| 249. ___ stingy | 277. ___ undependable | |
| 250. ___ stolid | 278. ___ understanding | |
| 251. ___ strong | 279. ___ unemotional | |
| 252. ___ stubborn | 280. ___ unexcitable | |
| 253. ___ submissive | 281. ___ unfriendly | |
| 254. ___ suggestible | 282. ___ uninhibited | |
| 255. ___ sulky | 283. ___ unintelligent | |
| 256. ___ superstitious | 284. ___ unkind | |
| 257. ___ suspicious | 285. ___ unrealistic | |
| 258. ___ sympathetic | 286. ___ unscrupulous | |
| 259. ___ tactful | 287. ___ unselfish | |
| 260. ___ tactless | 288. ___ unstable | |
| 261. ___ talkative | 289. ___ vindictive | |
| 262. ___ temperamental | 290. ___ versatile | |

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